s18quiz: EXP LOG (Example v1)
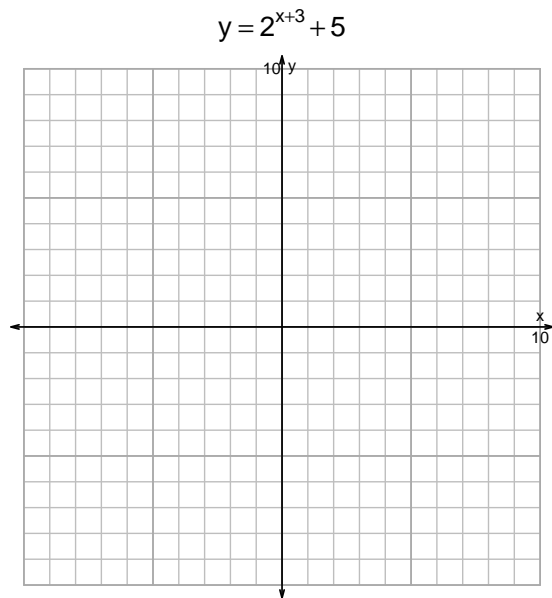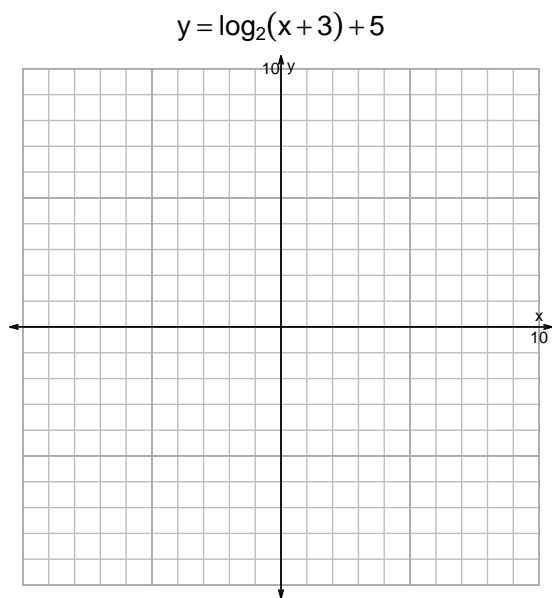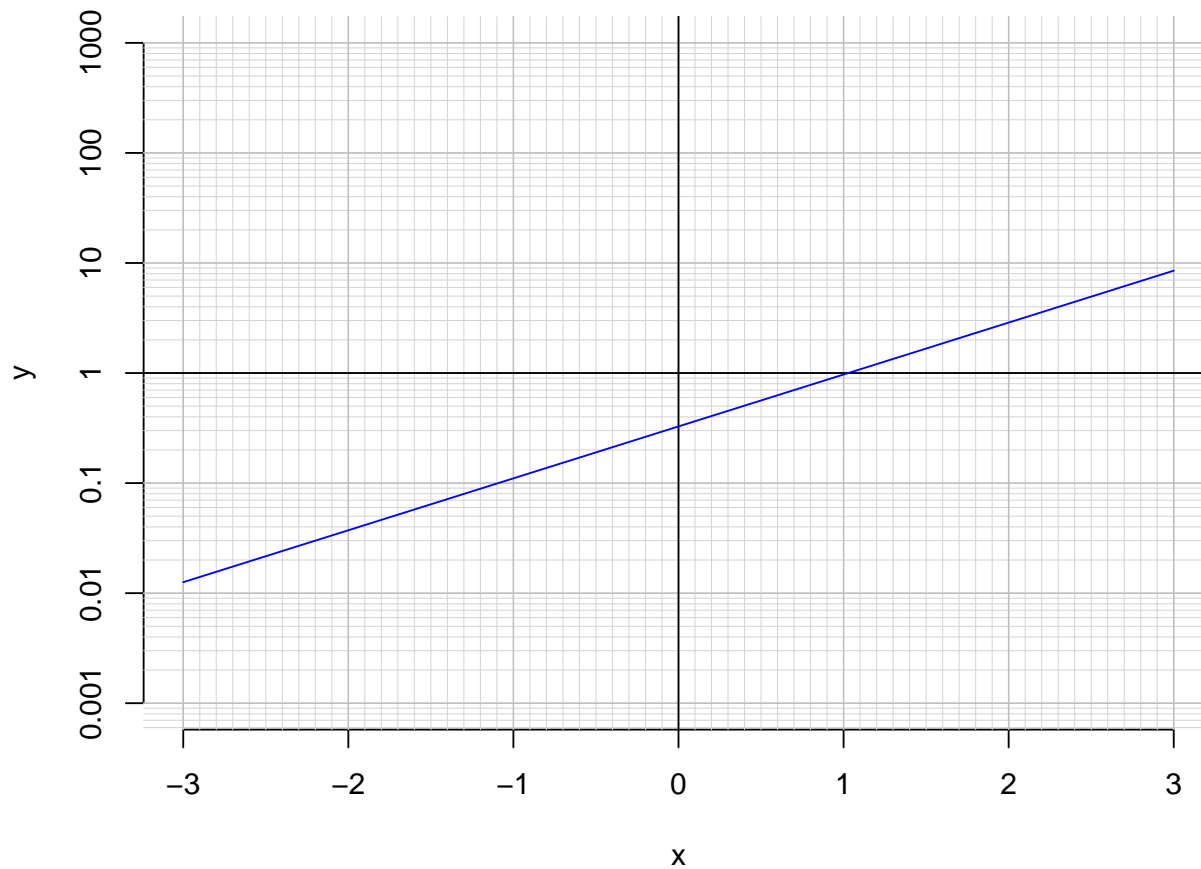
1. Graph $y = \log_2(x + 3) + 5$ and $y = 2^{x+3} + 5$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x+3) + 5$$

$$y = 2^{x+3} + 5$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$11 = \left(\frac{3}{7}\right) \cdot 2^{5t/4}$$

3. An exponential function $f(x) = 0.327 \cdot e^{1.09x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(0.7)$.
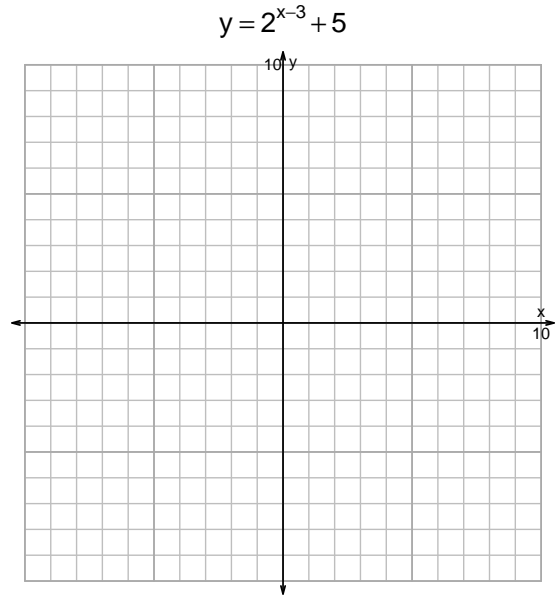
b. Express $f^{-1}(x)$, the inverse of f.

c. Using the plot above, evaluate $f^{-1}(0.03)$.

s18quiz: EXP LOG (Example v2)

1. Graph $y = \log_2(x + 6) - 3$ and $y = 2^{x-3} + 5$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x+6) - 3$$

$$y = 2^{x-3} + 5$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$13 = \left(\frac{4}{5}\right) \cdot 2^{3t/7}$$

3. An exponential function $f(x) = 2.07 \cdot e^{2.08x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(-0.4)$.
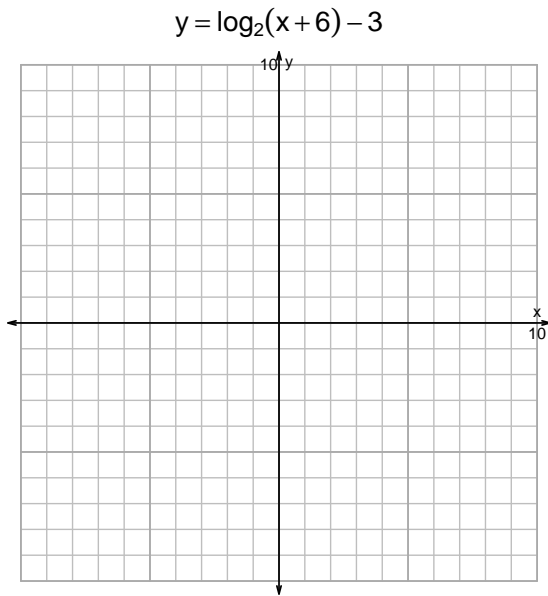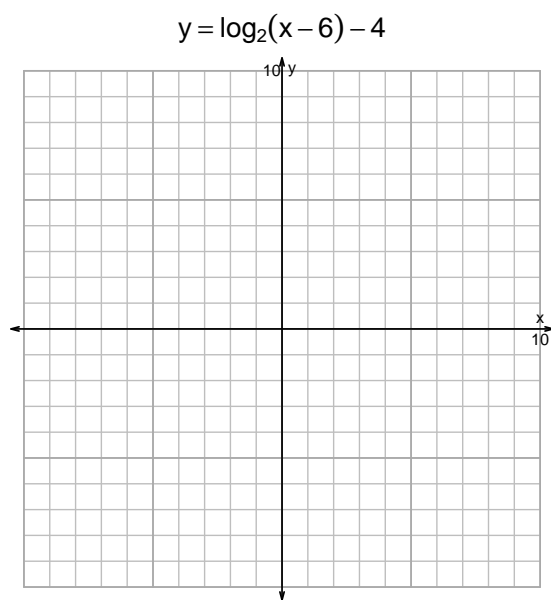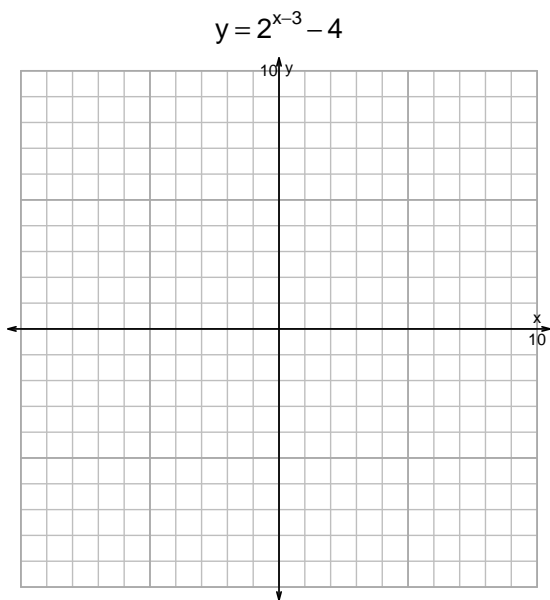
b. Express $f^{-1}(x)$, the inverse of f.

c. Using the plot above, evaluate $f^{-1}(0.005)$.

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s18quiz: EXP LOG (Example v3)

1. Graph $y = 2^{x-3} - 4$ and $y = \log_2(x-6) - 4$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = 2^{x-3} - 4$$

$$y = \log_2(x-6) - 4$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$13 = \left(\frac{4}{5}\right) \cdot 10^{7t/3}$$

3. An exponential function $f(x) = 0.0792 \cdot e^{-1.72x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(1.5)$.
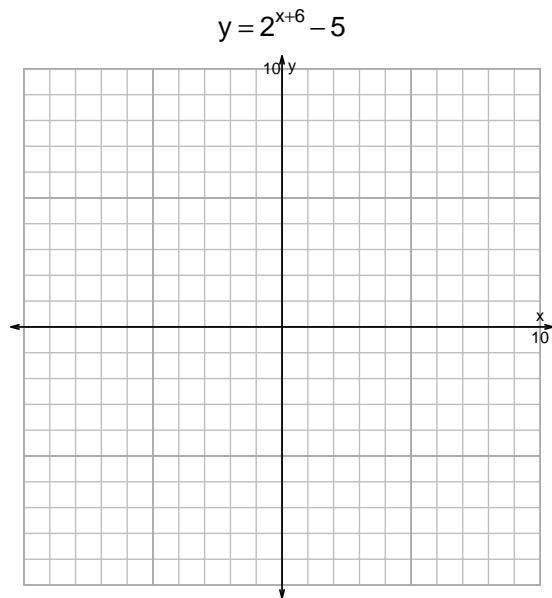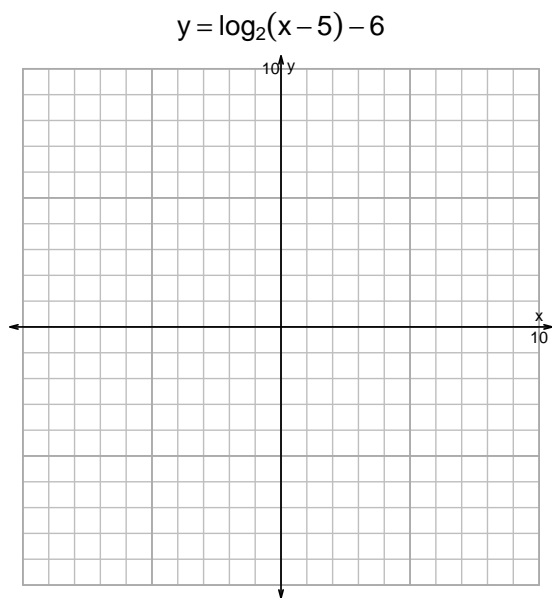
b. Express $f^{-1}(x)$, the inverse of f.
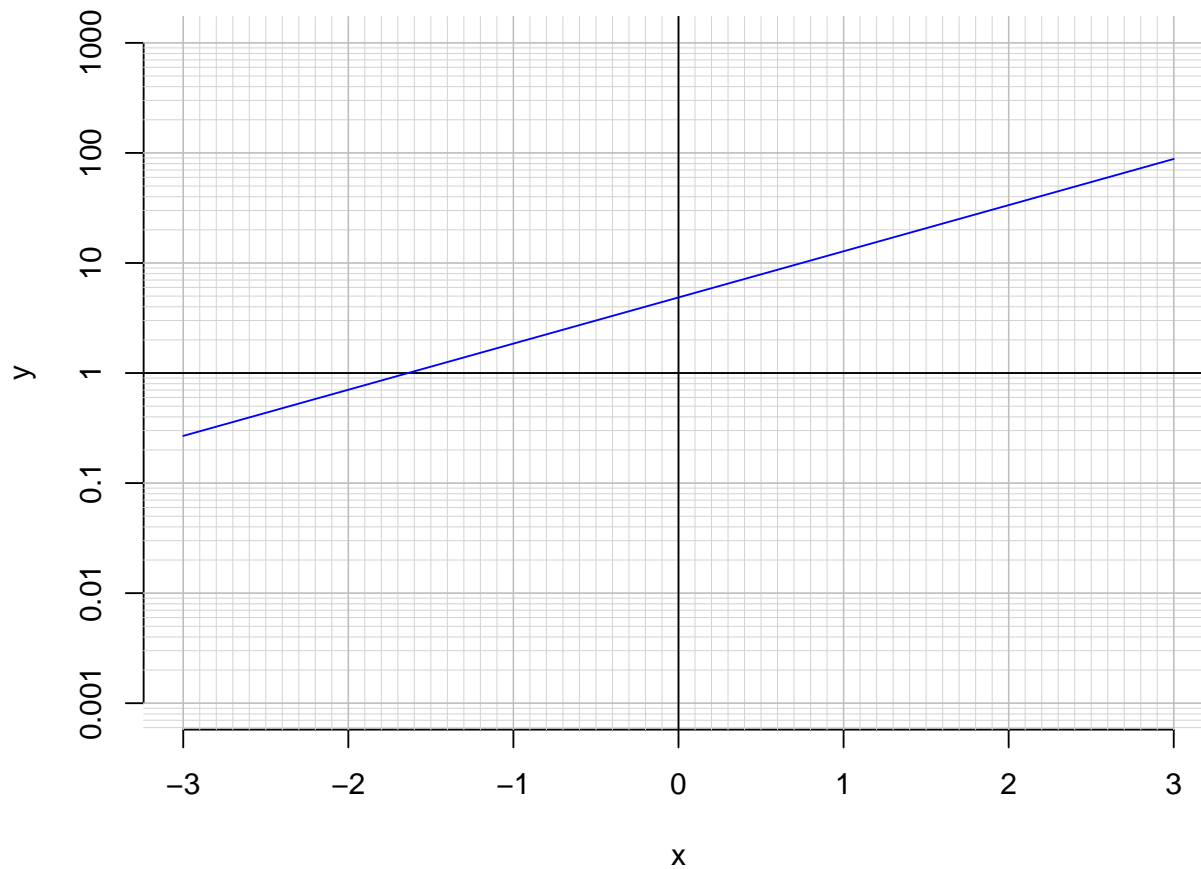
c. Using the plot above, evaluate $f^{-1}(0.02)$.

s18quiz: EXP LOG (Example v4)

1. Graph $y = \log_2(x-5) - 6$ and $y = 2^{x+6} - 5$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x-5) - 6$$

$$y = 2^{x+6} - 5$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$17 = \left(\frac{4}{7}\right) \cdot 10^{-5t/3}$$

3. An exponential function $f(x) = 4.86 \cdot e^{0.966x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(-0.5)$.

b. Express $f^{-1}(x)$, the inverse of f.
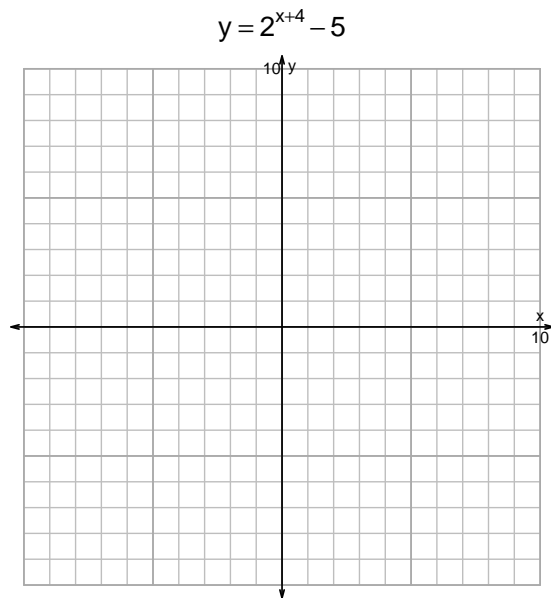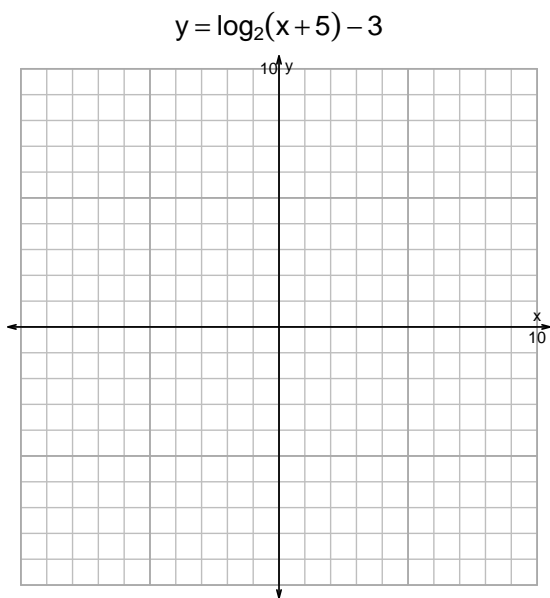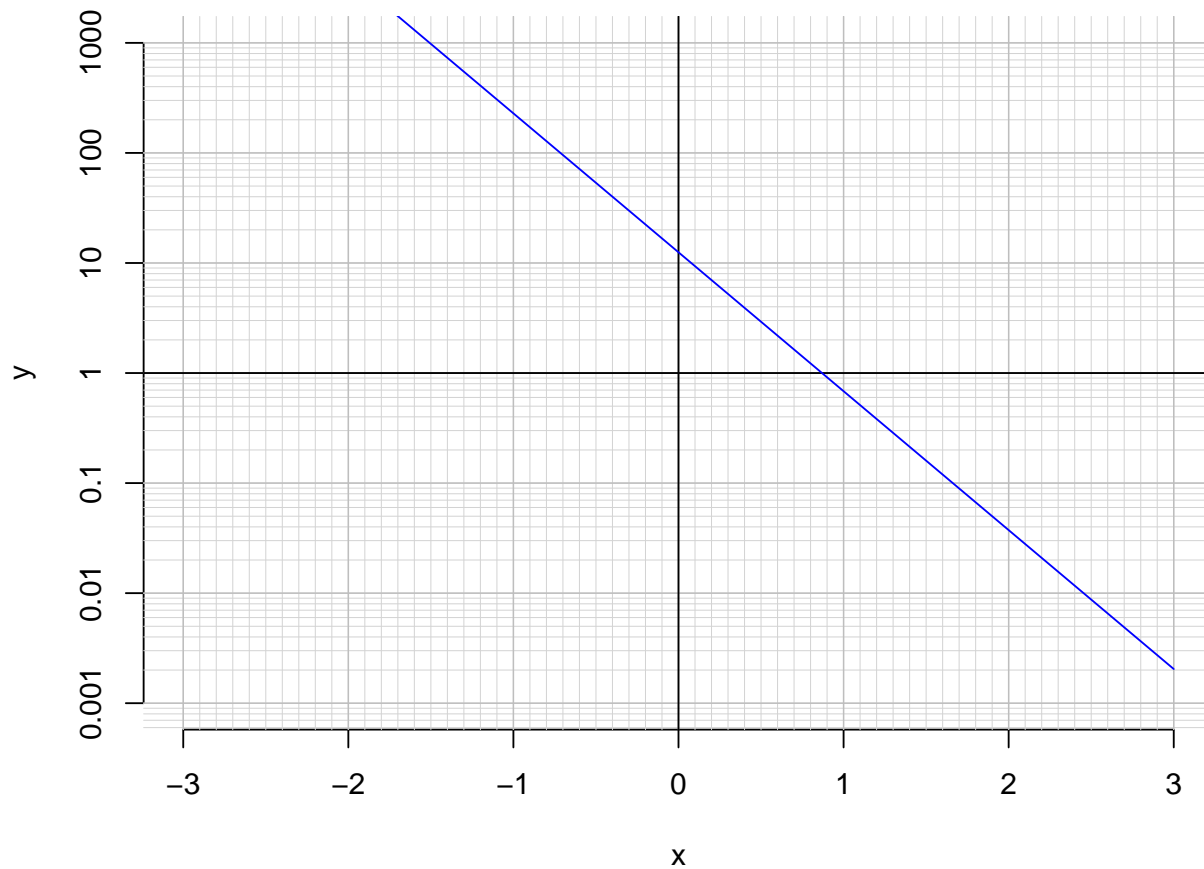
c. Using the plot above, evaluate $f^{-1}(80)$.

s18quiz: EXP LOG (Example v5)

1. Graph $y = \log_2(x + 5) - 3$ and $y = 2^{x+4} - 5$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x + 5) - 3$$

$$y = 2^{x+4} - 5$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$-13 = \left(\frac{-5}{7}\right) \cdot 2^{-4t/3}$$

3. An exponential function $f(x) = 12.5 \cdot e^{-2.91x}$ is graphed below on a semi-log plot.
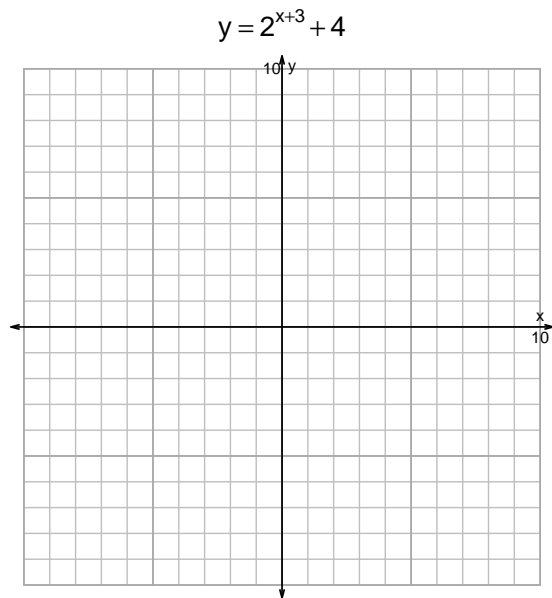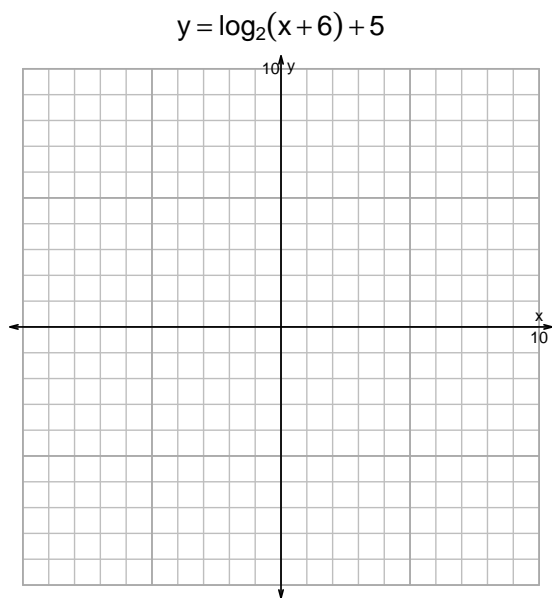

a. Using the plot above, evaluate $f(1.9)$.

b. Express $f^{-1}(x)$, the inverse of f.
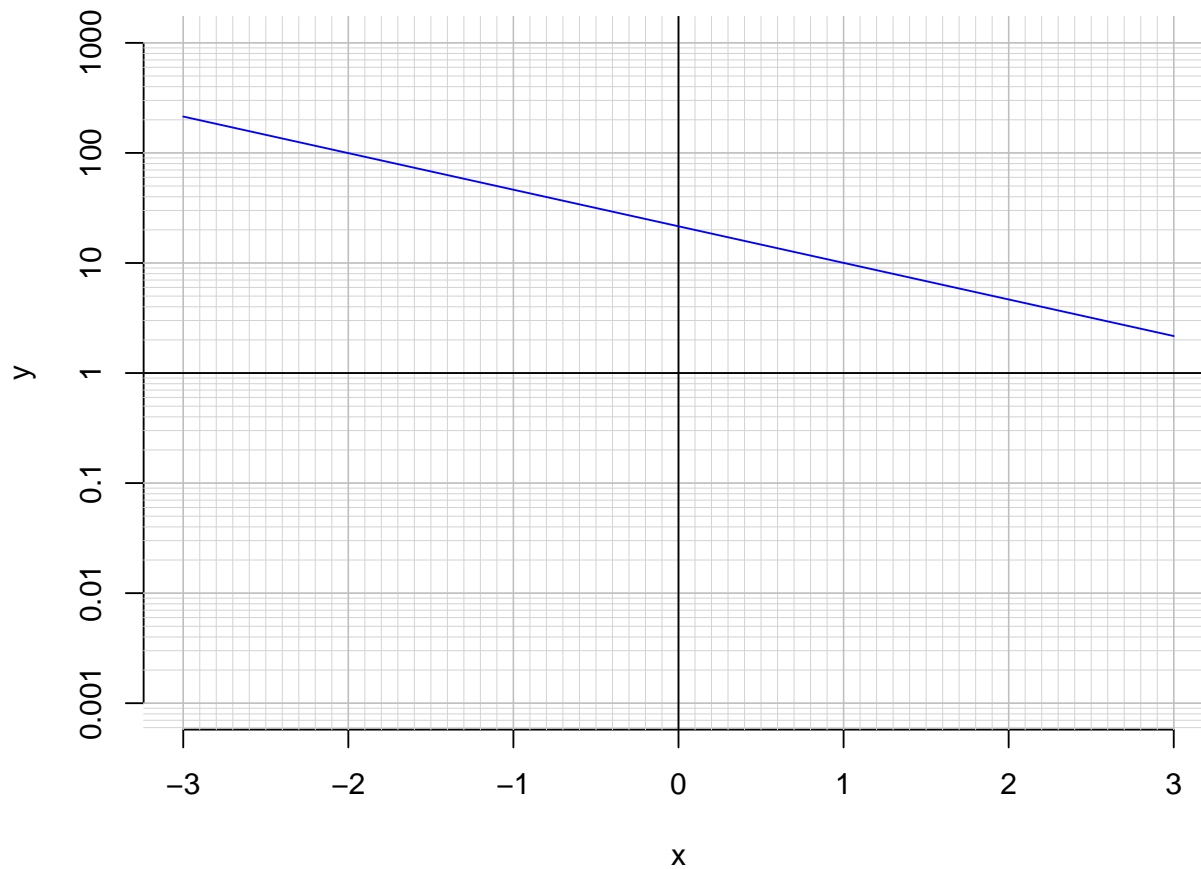
c. Using the plot above, evaluate $f^{-1}(40)$.

s18quiz: EXP LOG (Example v6)

1. Graph $y = \log_2(x + 6) + 5$ and $y = 2^{x+3} + 4$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x + 6) + 5$$

$$y = 2^{x+3} + 4$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$11 = \left(\frac{4}{5}\right) \cdot 10^{-3t/7}$$

3. An exponential function $f(x) = 21.5 \cdot e^{-0.765x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(-1.1)$.
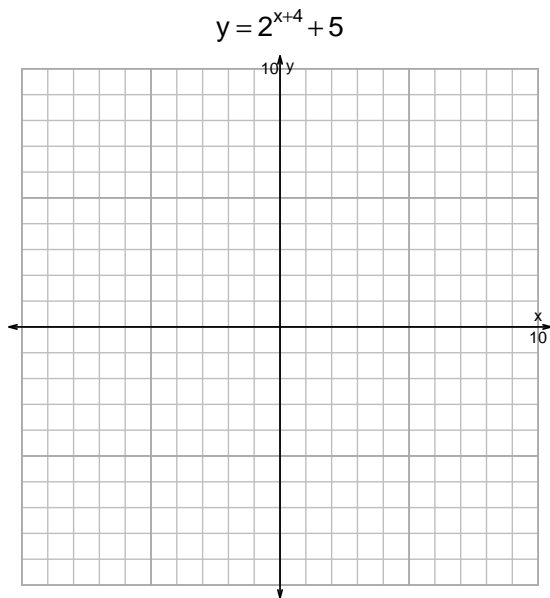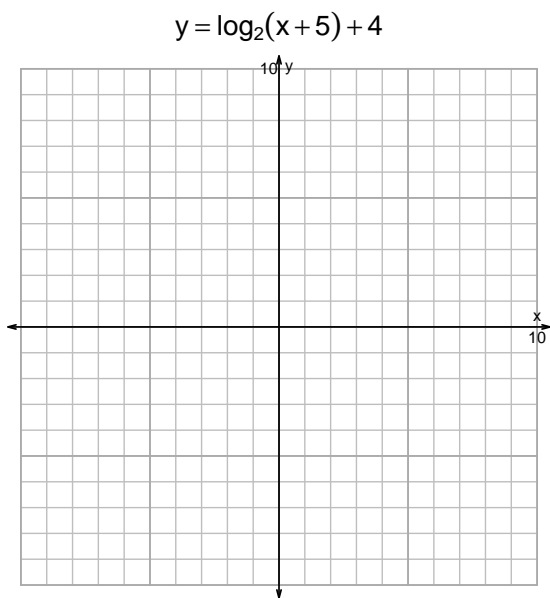
b. Express $f^{-1}(x)$, the inverse of f.

c. Using the plot above, evaluate $f^{-1}(4)$.

s18quiz: EXP LOG (Example v7)

1. Graph $y = \log_2(x + 5) + 4$ and $y = 2^{x+4} + 5$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x + 5) + 4$$

$$y = 2^{x+4} + 5$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$-17 = \left(\frac{-5}{4}\right) \cdot 10^{3t/7}$$

3. An exponential function $f(x) = 27 \cdot e^{1.59x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(0.6)$.
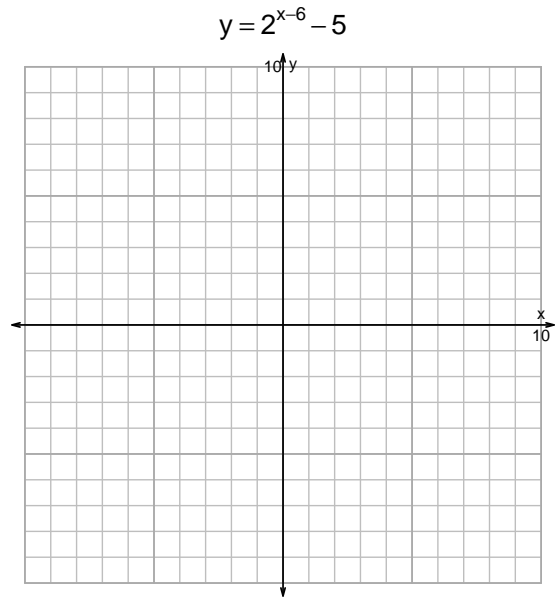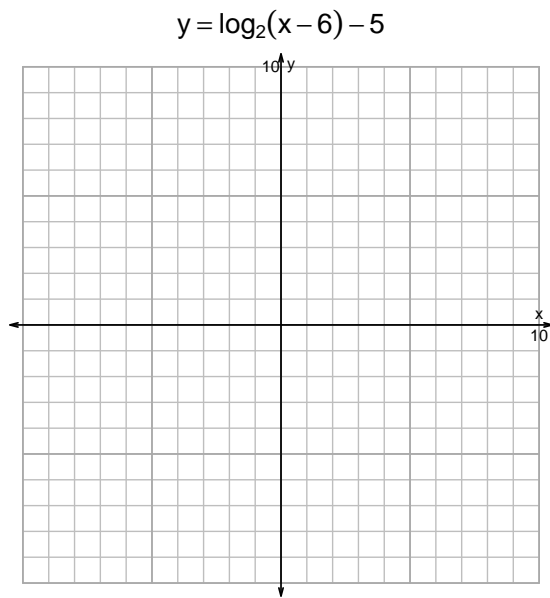
b. Express $f^{-1}(x)$, the inverse of f.
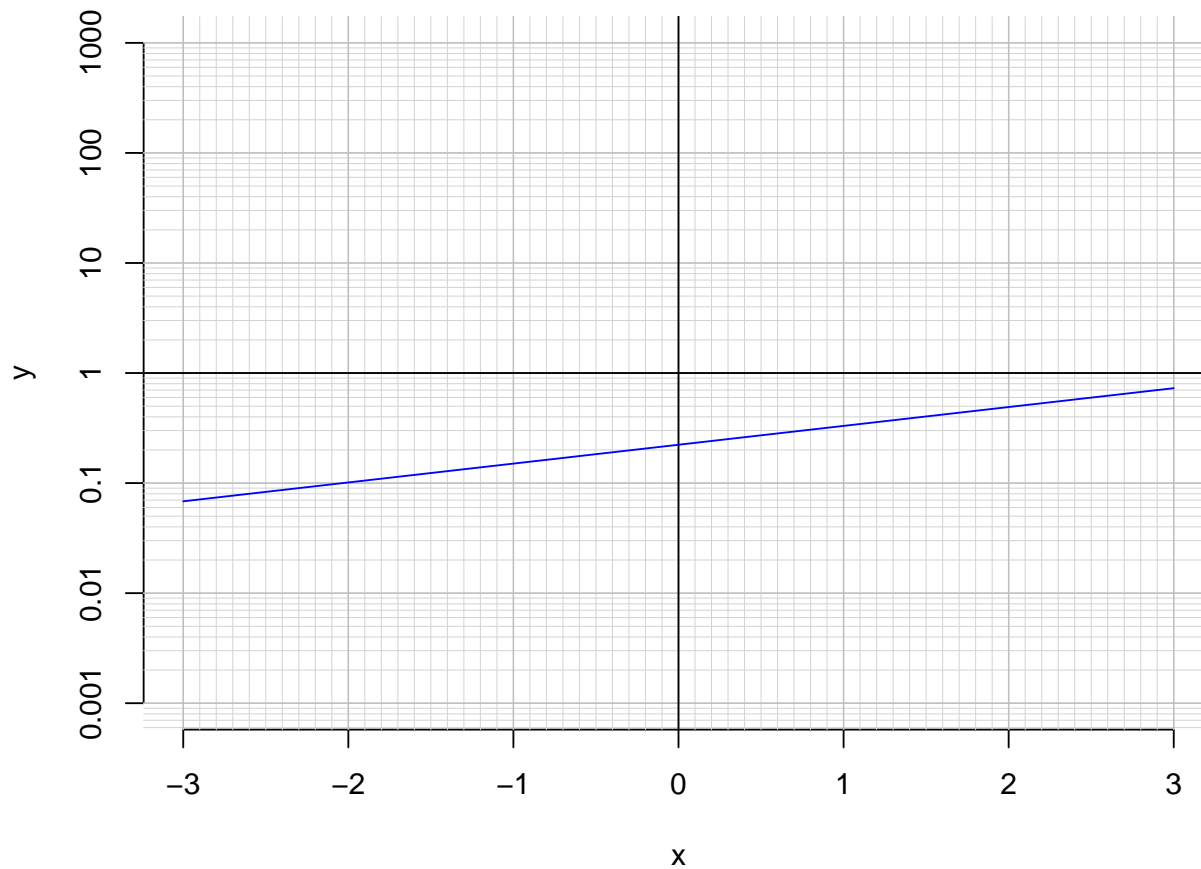
c. Using the plot above, evaluate $f^{-1}(4)$.

s18quiz: EXP LOG (Example v8)

1. Graph $y = \log_2(x - 6) - 5$ and $y = 2^{x-6} - 5$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x - 6) - 5$$

$$y = 2^{x-6} - 5$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$19 = \left(\frac{4}{5}\right) \cdot 2^{3t/7}$$

3. An exponential function $f(x) = 0.223 \cdot e^{0.394x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(2.9)$.

b. Express $f^{-1}(x)$, the inverse of f.
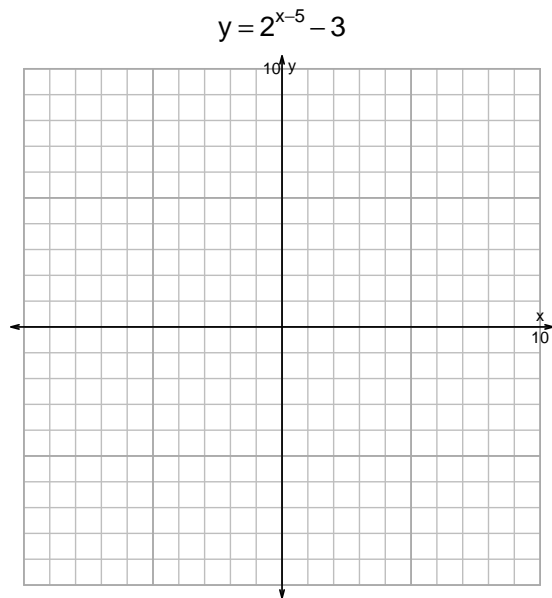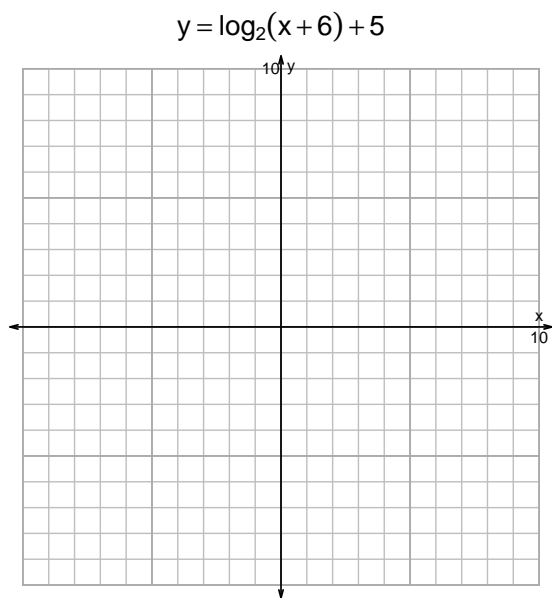
c. Using the plot above, evaluate $f^{-1}(0.08)$.

s18quiz: EXP LOG (Example v9)

1. Graph $y = \log_2(x + 6) + 5$ and $y = 2^{x-5} - 3$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x + 6) + 5$$

$$y = 2^{x-5} - 3$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$19 = \left(\frac{7}{3}\right) \cdot 10^{4t/5}$$

3. An exponential function $f(x) = 1.07 \cdot e^{1.13x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(2.6)$.

b. Express $f^{-1}(x)$, the inverse of f.

c. Using the plot above, evaluate $f^{-1}(0.09)$.

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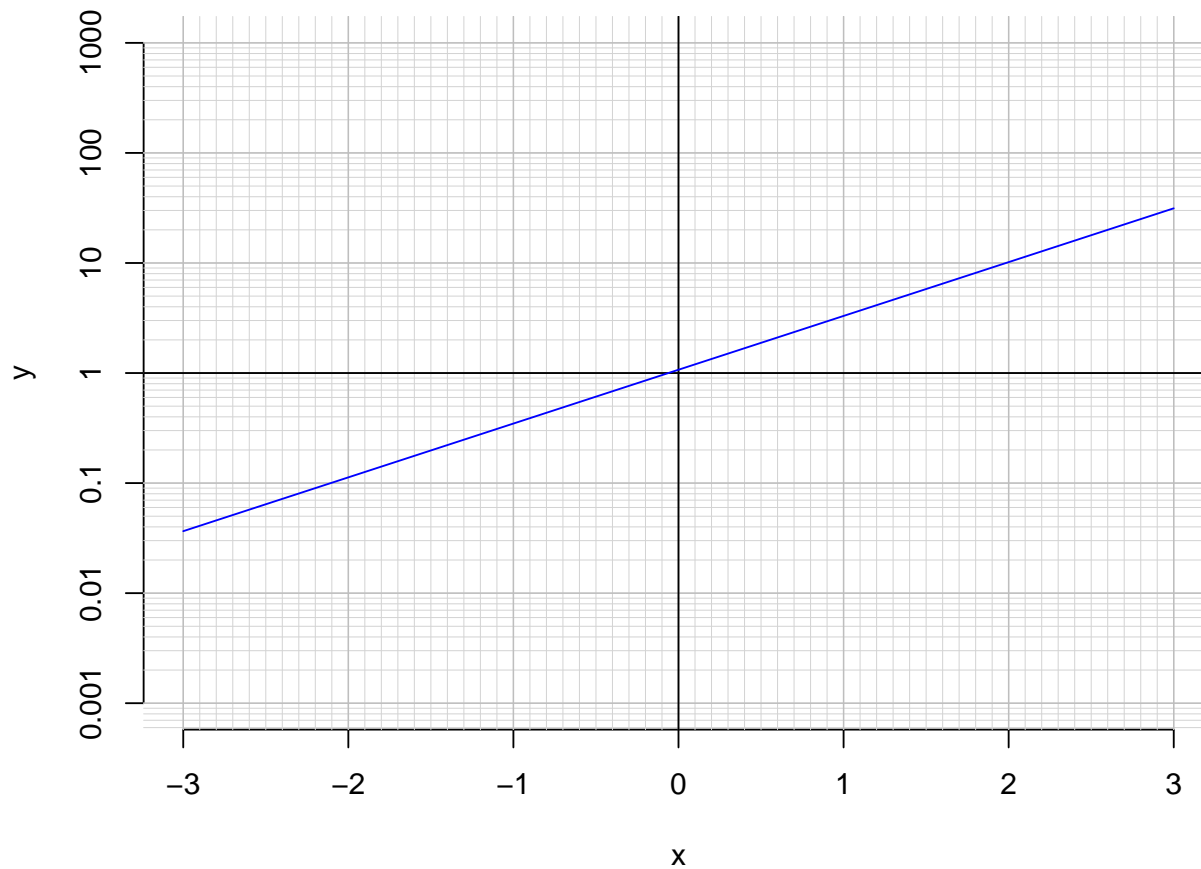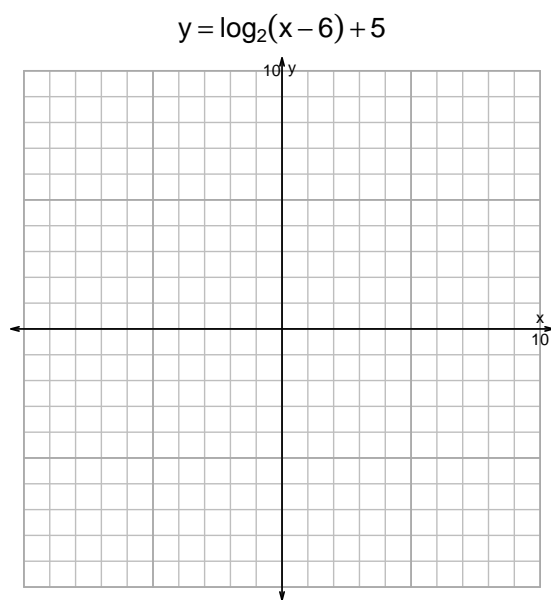
s18quiz: EXP LOG (Example v10)

1. Graph $y = 2^{x-5} + 3$ and $y = \log_2(x-6) + 5$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = 2^{x-5} + 3$$

$$y = \log_2(x-6) + 5$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$-23 = \left(\frac{-7}{5}\right) \cdot 2^{3t/4}$$

3. An exponential function $f(x) = 0.0714 \cdot e^{2.59x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(2.6)$.
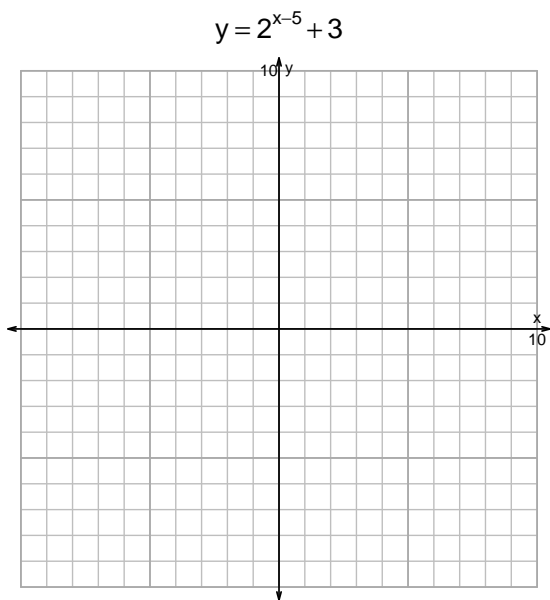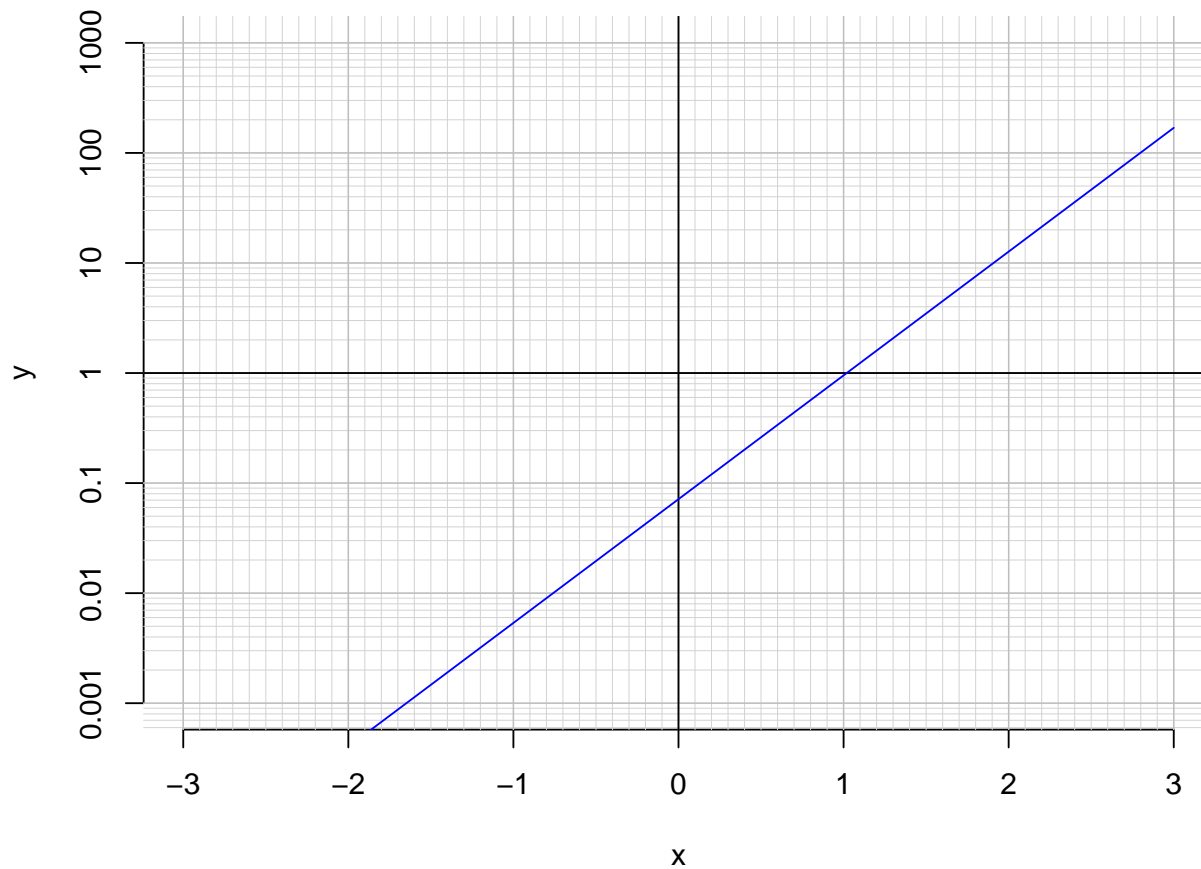
b. Express $f^{-1}(x)$, the inverse of f.

c. Using the plot above, evaluate $f^{-1}(0.009)$.